

## Complement System

The complement system, like antibodies, is a series of proteins. There are millions of different antibodies in your blood stream, each sensitive to a specific antigen. There are only a handful of proteins in the complement system, and they are floating freely in your blood. Complements are manufactured in the liver. The complement proteins are activated by and work with (complement) the antibodies, hence the name. They cause lysing (bursting) of cells and signal to phagocytes that a cell needs to be removed.

For additional information on complements, see [The Complement System](#).

## Hormones

There are several hormones generated by components of the immune system. These hormones are known generally as **lymphokines**. It is also known that certain hormones in the body suppress the immune system. Steroids and corticosteroids (components of adrenaline) suppress the immune system.

Tymosin (thought to be produced by the thymus) is a hormone that encourages lymphocyte production (a lymphocyte is a form of white blood cell - see below). Interleukins are another type of hormone generated by white blood cells. For example, Interleukin-1 is produced by macrophages after they eat a foreign cell. IL-1 has an interesting side-effect - when it reaches the hypothalamus it produces fever and fatigue. The raised temperature of a fever is known to kill some bacteria.

For additional information see [Manifestations of Infection: Fever](#) and [IL-1](#).

## Tumor Necrosis Factor

Tumor Necrosis Factor (TNF) is also produced by macrophages. It is able to kill tumor cells, and it also promotes the creation of new blood vessels so it is important to healing.

## Interferon

Interferon interferes with viruses (hence the name) and is produced by most cells in the body. Interferons, like antibodies and complements, are proteins, and their job is to let cells signal to one another. When a cell detects interferon from other cells, it produces proteins that help prevent viral replication in the cell.

You are probably aware of the fact that you have "red blood cells" and "white blood cells" in your blood. The white blood cells are probably the most important part of your immune system. And it turns out that "white blood cells" are actually a whole collection of different cells that work together to destroy bacteria and viruses. Here are all of the different types, names and classifications of white blood cells working inside your body right now:

- Leukocytes
- Lymphocyte
- Monocytes
- Granulocytes
- B-cells
- Plasma cells
- T-cells
- Helper T-cells
- Killer T-cells
- Suppressor T-cells
- Natural killer cells
- Neutrophils
- Eosinophils
- Basophils
- Phagocytes

- Macrophages